Venus Upper Atmosphere Investigations Science and Technical Interchange Meeting

Venus Measurement Priorities

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Measurements Needed to Understand the Venus Clouds-level Atmosphere

- Thermal structure/thermal balance
 - Vertical distribution of temperature, opacity, and solar/thermal flux
- Trace gas composition
 - Vertical profiles of principle absorbers and cloud forming gases within the clouds
 - SO2, OCS, (H2S, SO3), H2O, HDO, CO, HCl, HF, HBr
 - "tracers" of horizontal/vertical motions above, below, and within clouds (CO, SO2)
- Cloud/aerosol distribution and optical properties
 - Composition, phase, vertical distribution, and lifetime of the UV absorber
 - Composition, physical properties, and space/time variability of H2SO4 aerosols
 - Relationship between the cloud particle population and the ambient wind, temperature and trace gas fields?
- Atmospheric motions
 - Pole-to-pole structure of the zonal winds above below the clouds
 - Spectrum of waves above, below, and within the clouds
- New observations from well-equipped entry probes and long-lived orbiters are needed to address these questions.